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Credit risk transfer and bank competition [★]

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ABSTRACT

We present a banking model with imperfect competition in which borrowers' access to credit is improved when banks are able to transfer credit risks. However, the market for credit risk transfer (CRT) works smoothly only if the quality of loans is public information. If the quality of loans is private information, banks have an incentive to grant unprofitable loans that are then transferred to other parties, leading to an increase in aggregate risk. Higher competition increases welfare in the presence of CRT with public information. In contrast, welfare eventually decreases for high levels of competition in the presence CRT with private information due to the expansion of unprofitable loans. This finding coincides with the decrease in credit quality observed during the late years of the credit boom preceding the subprime crisis.

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1. Introduction

In the years before the subprime crisis, many countries have seen an explosion in the use of instruments for credit risk transfer (CRT) by financial institutions. At that time, this development was welcomed by many observers. Most prominently, it was argued that CRT leads to a desirable

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redistribution and better diversification of credit risks (see, e.g., Allen and Gale, 2005). Another advantage is the potential of CRT to improve the access to credit for firms and households (or, put differently, the ability of banks to free up capital; see, e.g., Chiesa, 2008). However, the advent of the subprime crisis has raised doubts about the overall benefits of credit risk transfer. The recent experience suggests that CRT may also lead to a deterioration of loan quality, with detrimental consequences for financial stability.

From a theoretical perspective, this decline in loan quality did not come unexpectedly. The early literature on credit risk transfer emphasized the reduced monitoring incentives of banks, once a loan has been transferred to a third party (see, e.g., Pennacchi, 1988; Gorton and Pennacchi, 1995).² However, recent empirical findings also suggest that there has been an expansion of low quality loans.³ Many of the loans granted during the credit boom preceding the subprime crisis were of such a bad quality that banks must have been aware of the poor loan quality when the loan was granted (an extreme example are the notorious "ninja" loans). It seems that banks granted low quality loans and transferred them to other parties afterwards.⁴

In addition, the decrease in lending standards on the eve of the subprime crisis has been shown to be related to the market structure in the banking sector. Dell'Ariccia et al. (2008) show that loan denial rates in the subprime segment decreased more in areas with highly competitive banking markets and that the market entry of new financial institutions induced a further decrease in lending standards. The role of banking competition in the presence of credit risk transfer has to our knowledge not yet been dealt with in the theoretical literature.

Our paper models banks' moral hazard problem in the *origination* of loans and shows how it is affected by the degree of competition in the banking sector. We start from a banking model with imperfect competition, in which the access of risky, but profitable borrowers to bank credit is constrained due to banks' limited risk-bearing capacities. Such constraints may arise from regulatory constraints, bankruptcy costs, or bankers' risk aversion. We show that the credit constraints are particularly tight if banking markets are highly competitive. The reason is that the rents from relatively safe loans, which can serve as a buffer for riskier activities, are small in the presence of fierce competition.

We then show that such credit constraints may be relaxed by allowing banks to transfer risks to outside investors. However, the functioning of CRT markets depends crucially on the type of information on which bank loans are based. If loans are granted on the basis of publicly observable information, a transfer of credit risk works smoothly and the access to credit for risky, but profitable borrowers is improved. Since the information is public, there is no moral hazard problem at the originating bank. The bank does not have an incentive to grant unprofitable loans because nobody will be willing to insure the risks from such loans. Hence, CRT is desirable from a welfare perspective.

If, however, loans are granted on the basis of privately observed information, the transfer of credit risk is hampered by problems of asymmetric information. If credit insurers cannot observe a loan's quality, banks have an incentive to grant unprofitable loans and to transfer the risks from these loans to the insurers. This is anticipated by the credit insurers who will demand a lemons premium for credit risk transfer. CRT generally still improves the access to finance for risky, but profitable borrowers, but it also improves the access to finance for unprofitable borrowers. As a result, the aggregate risk in the economy increases. Note that, in our model, the overall welfare effect of CRT is positive even with private information. The reason is that the positive welfare effects from a better access to finance for profitable borrowers overcompensate the welfare losses from financing projects with negative net present values (NPV).⁵

¹ For an excellent survey on credit risk transfer, see Duffie (2007).

² Other papers dealing with the effects of CRT on monitoring incentives include Morrison (2005), Chiesa (2008), Parlour and Plantin (2008), and Cerasi and Rochet (2008). See Ashcraft and Santos (2009) for empirical evidence.

³ Dell'Ariccia et al. (2008) document a decline in loan denial rates, which they interpret as a decrease in lending standards.

⁴ This view is supported by the finding of Dell'Ariccia et al. (2008) that the decline in loan denial rates was more pronounced in regions with higher securitization rates. Moreover, Keys et al. (2010) show that loans eligible for securitization on average defaulted much more frequently than loans with similar observable risk characteristics that were not eligible for CRT. They interpret their finding as evidence for laxer screening of loans that were to be securitized.

⁵ The paper by Parlour and Plantin (2008) yields similar findings regarding the incentive effects of CRT, although it deals with monitoring rather than screening. Interestingly, their results on welfare are contrary to ours. We will discuss the reasons behind this difference at the end of the paper.

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